

**TROGIUM EVANSORUM SP. N. (PSOCOPTERA: TROGIIDAE) A REMARKABLE, PROGNATHOUS SPECIES FROM NORFOLK ISLAND**

C.N. SMITHERS

*Research Associate, Australian Museum, P.O. Box A285, Sydney South, N.S.W., 2000***Summary**

*Trogium evansorum* sp. n. a species of Trogiidae (Psocoptera), unusual in that it is prognathous, is described from the crown of a "Kentia" palm (*Howea forsterana* (C. Moore and F.J. Muell.)) on Norfolk Island.

**Introduction**

There are nineteen species of Psocoptera recorded from Norfolk and smaller neighbouring islands (Smithers 1986). A twentieth species, *Trogium evansorum* sp. n. represented by a single remarkable prognathous female specimen collected from the crown of a "Kentia" palm (*Howea forsterana* (C. Moore and F.J. Muell.)), is described here.

*Trogium evansorum* sp. n. Figs. 1-10.

**Female**

Coloration (in alcohol). Head, body and appendages almost colourless. Eyes pale reddish. Epicranial suture colourless except for brownish spot on highest point on vertex. Heavily sclerotized parts of mandibles show up brown against colourless head capsule.

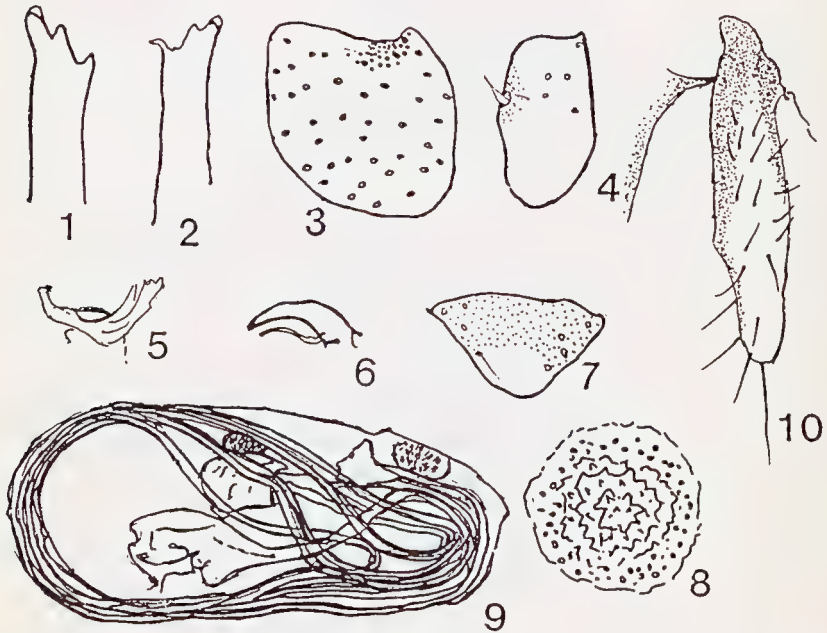
Morphology. Strongly prognathous, with head and body somewhat dorsoventrally flattened. Length of body: 2.2 mm. Median epicranial suture present; anterior arms not evident. Vertex unusually sharp for a species of *Trogium*, fitting closely against prothorax. Seen from side vertex, frons and postclypeus in same almost horizontal plane, setose. Postclypeus fairly bulbous, anterior part somewhat overhanging anteclypeus and labrum. Labrum with elongate, posteriorly directed projection internally in middle of anterior margin. Owing to prognathous form of head, antennae well forward on head capsule. Antennae incomplete, presumably of more than twenty segments. Length of flagellar segments: f1: 0.07 mm; f2: 0.08 mm; f3: 0.08 mm; f4: 0.07 mm; f5: 0.08 mm. Eyes fairly large, oval when seen from side following contour of head; hardly protruding. IO/D (Pearman): 3.5. No ocelli. Lacinia (fig. 1, right side, ventral view; fig. 2, left side, ventral view). Left lacinia with three apical tines, outer slightly divided, the inner smaller, pointed, inwardly curved. Right lacinia also with three tines, with outer tine slightly divided, inner tine straight, bluntly pointed. Maxillary palp with fourth segment hatchet shaped, as usual in genus; second segment with small short sensillum, shorter than usual in the genus. Measurements of hind leg: F: 0.35 mm; T: 0.55 mm; t1: 0.21 mm; t2: 0.06 mm; t3: 0.05 mm; rt: 3.5:1:0.83. Hind tibia setose, with some strong setae and with two apical spines but without preapical spines. Claws (fig. 6) without preapical tooth, pulvillus fine and sinuous. Hind femur broad, flattened. Fore wing length:

0.24 mm; width: 0.20 mm. Fore wing (fig. 3) reduced to rounded flap, lightly sclerotized, without veins, with evenly distributed setae. No hind wings. Epiproct (fig. 7) simple, rounded behind with a few setae in lateral quarters; middle of epiproct glabrous. Paraproct (fig. 4) sparsely setose, a few setae in dorsal half, without trichobothria, with moderately large posterior spine. Subgenital plate simple, setose. Gonapophyses (fig. 10) with external valve elongate, very narrow, setose, tapering to narrow, rounded end. Other valves not evident. Spermatheca (fig. 9) large, complex, duct not ridged. Spermathecal pore (fig. 5) with asymmetrical sclerite. Two parietal glands (fig. 8) coarsely papillate with narrow marginal band of pores.

#### Material examined

1 ♀ (holotype), ex "Kentia" palm tree crown, Norfolk Island, 3.iii.1986, N. Tavener. Holotype in Australian Museum, Sydney.

This species is named for Owen and Beryl Evans, in recognition of their life-long study of the natural history of Norfolk Island, their dedication to conservation of the island and their constant and generous help to naturalists visiting Norfolk Island. Mrs Evans informs me that the "Kentia palm" referred to is *Howea forsterana*.



**Figs. 1-10.** *Trogius evansorum* sp. n. Female. (1) Right lacinia, ventral view. (2) Left lacinia, ventral view. (3) Right fore wing. (4) Paraproct. (5) Entrance to spermatheca. (6) Claw. (7) Epiproct. (8) Parietal gland. (9) Spermatheca. (10) Gonapophyses.

## Discussion

*Trogium evansorum* exhibits the characters of the genus but is remarkable in having a prognathous head and somewhat flattened body and hind femora and in being virtually colourless. Most species of the genus have some pigment and pattern, at least on the head, and are rotund with head of normal proportions. In addition to these features it differs from *T. apterum* Broadhead and Richards (Kenya) and *T. picticeps* Badonnel (Madagascar) in not being apterous but in having obvious wing rudiments of the flap-like, rounded type found in other species of the genus. From *T. braheicola* Garcia Aldrete (Mexico) it differs in having much narrower gonapophyses, the Mexican species having a relatively shorter and particularly broad external valve. In *T. lapidarius* (Badonnel) (Angola) and *T. pulsatorium* (L.) (cosmopolitan and the only other species of the genus recorded from Australia) there is at least some pigment and pattern on the head. From *T. stellatum* (Badonnel) (Angola) it differs in the form of the parietal glands on the spermatheca and in lacking ridges on the spermathecal duct.

## Acknowledgements

I would like to thank Dr N. Tavener for collecting this interesting specimen and Beryl Evans for providing the name of the palm.

## Reference

SMITHERS, C.N. 1986. Some new records of Psocoptera from Norfolk and Phillip Islands. *Australian Entomological Magazine* 13: 33-34.